(No Model.)

W. SCARBOROUGH.

WAGON BOX ELEVATOR AND DUMP.

No. 342,880. Patented June 1, 1886.

Fig. 1

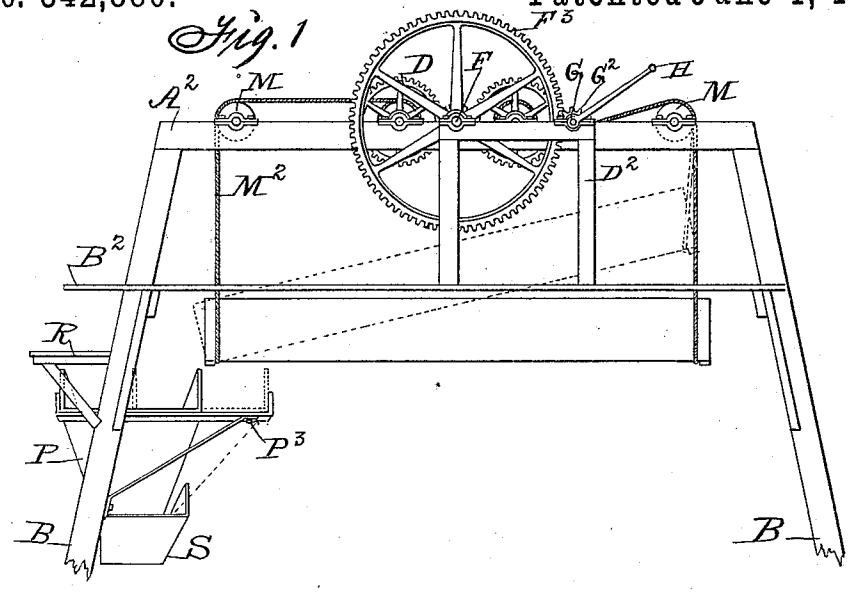


Fig. 2

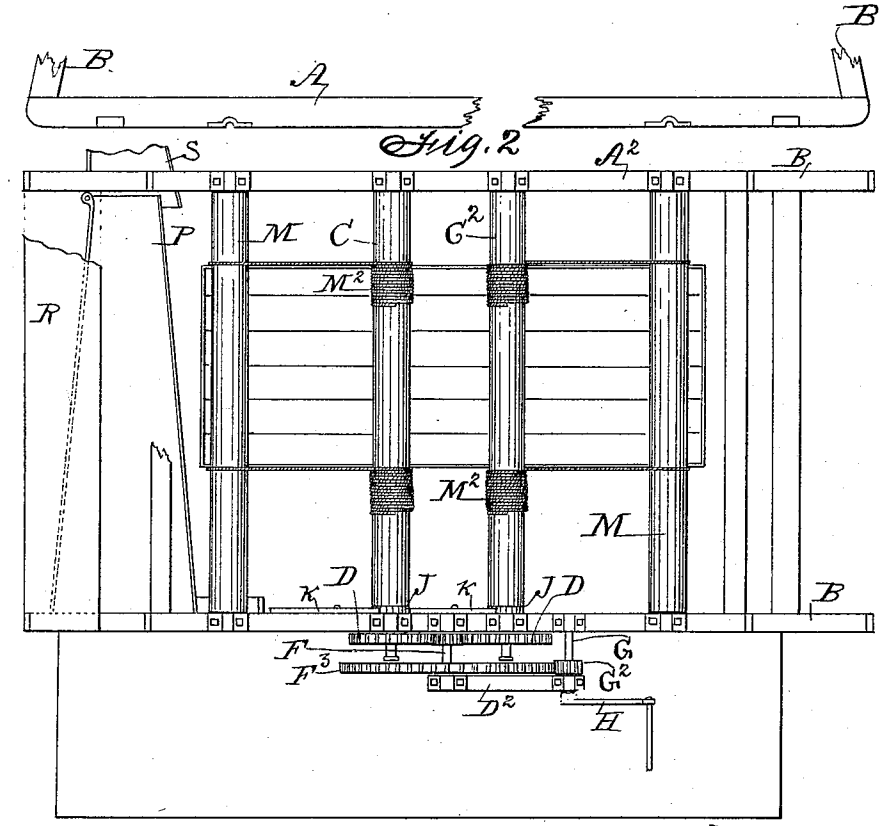
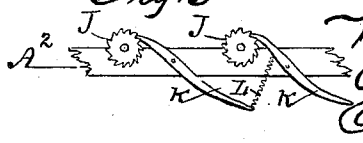


Fig. 3



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UNITED STATES PATENT OFFICE.

WILLIAM SCARBOROUGH, OF IRWIN, IOWA.

WAGON-BOX ELEVATOR AND DUMP.

SPECIFICATION forming part of Letters Patent No. 342,880, dated June 1, 1886.

Application filed February 2, 1886. Serial No. 190,602. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM SCARBOROUGH, a citizen of the United States of America, and a resident of Irwin, in the county of Shelby and State of Iowa, have invented a Wagon-Box Elevator and Dump, of which the following is a specification.

My object is to save time, labor, and expense in unloading small grain, corn, potatoes, &c., from farm-wagons and storing the same in elevators and cribs and bins, or in conveying such products in bulk from a wagon into a car for shipment.

My invention consists in the construction and combination of a frame, a platform, a duplex winch, and an adjustable chute, as hereinafter set forth, pointed out in my claims, and illustrated in the accompanying drawings, in which—

Figure 1 is a side view, and Fig. 2 a top view, of my apparatus, from which parts are broken away. Fig. 3 is a sectional view showing a spring and two pawls combined in the duplex winch.

A represents an oblong frame and the base of my complete device. The ends of the parallel side pieces are rounded off to serve as runners in moving about the structure.

A^2 is an oblong frame, corresponding in width with the base A, but is less in length.

B are posts fixed to the corners of the frame A and A^2, to produce a portable frame adapted to support a loaded wagon-box and a person to operate the mechanism. This portable frame may vary in size, as desired, and in place of being portable it may be permanently fixed aside of a mill, grain-elevator, or other building.

B^2 is a platform fixed to the outside of the frame by means of brackets, to aid in bracing the frame and supporting the elevating and dumping mechanism and an operator.

C and C^2 are the cylinders of my duplex winch placed in parallel position across the top and center of the frame A^2, in bearings fixed to the frame.

D are gear-wheels, about twenty inches in diameter, placed on the angular ends of the journals of the cylinders C and C^2 in such a manner that they can be adjusted relative to a pinion placed between.

D^2 represents a frame fixed on top of the platform B^2.

F is a shaft in bearings fixed to the frames A^2 and D^2, and F^2 is a pinion or gear-wheel, about six (6) inches in diameter, fixed to the shaft F, to engage the wheels D.

F^3 is a gear-wheel, about forty-eight (48) inches in diameter, fixed to the same shaft, F.

G is a driving-shaft in parallel position with the shaft F in bearings fixed to the frames A^2 and D^2, and connected with the wheel F^3 by means of a gear-wheel, G^2, that is fixed to the shaft, as clearly shown in Fig. 2.

H is a crank on the end of the shaft G, by means of which the duplex winch is operated.

J are ratchet-wheels fixed to the cylinders C and C^2.

K are pawls pivoted to the frame A^2, to engage the wheels J. These pawls are connected by means of a spring, L, as clearly shown in Fig. 3, in such a manner that the spring will retain both pawls engaged with the ratchet-wheels J.

M M are rollers in bearings attached to the top of the frame A^2.

M^2 are ropes, that have their ends fixed to the cylinders C and C^2 and their doubled central portions suspended over the rollers M, to engage the ends of a wagon-box, as clearly shown in Fig. 1.

P represents a chute pivoted to a cross-piece, P^2, that is fixed to the corner-posts B.

P^3 is a bracket fixed to one of the corner-posts, to support the upper and free sliding end of the chute.

R is a platform fixed to the posts B, to support the operator while adjusting the chute relative to the end of a suspended wagon-box.

S is an extension of the chute R, to convey corn, &c., from the pivoted chute into a crib or other receptacle at the side of the complete apparatus.

In the practical use of my elevator and dump I drive a loaded wagon under the duplex winch, place the doubled ends or loops of the ropes M^2 under the ends of the box on the wagon, and then operate the winch by turning the crank H until the box is elevated above the chute P. I then slide the free end of the chute under the end of the box, open the end-gate, place one of the wheels D out of gear with the pinion

F^2, and then again turn the crank until one end of the loaded box is elevated, as indicated by dotted lines in Fig. 1, and the contents of the box dumped into the chute, and thereby conveyed to the place of deposit. The box thus elevated and emptied is then lowered and replaced upon the wagon, ready to be filled again.

I am aware that two drums and gearing to operate them jointly have been combined with an elevator-frame and crane-arm and a single rope to lift a weight by means of a single hold or fastening; but my manner of arranging and combining two drums and gearing and two ropes with a frame that has a passage-way for wagons in such a manner that the ropes can be attached to the opposite ends of the wagon-box, and simultaneously operated to elevate the loaded box, and also independently operated to dump the box, is novel and greatly advantageous in unloading wagons carrying corn or other substances in bulk.

I claim as my invention—

1. The duplex winch composed of two parallel cylinders, C and C^2, each having an adjustable gear-wheel, D, a shaft, F, having a fixed pinion, F^2, and a drive-wheel, F^3, a shaft, G, having a fixed pinion, G^2, and a crank, H, two rollers, M, and two ropes, M^2, arranged and combined upon a supporting-frame, substantially as and for the purposes stated.

2. The pivoted pawls K and the spring L, in combination with the cylinders C and C^2, each having a ratchet-wheel, J, the two rollers M, and the two ropes M^2, to operate in the manner set forth, for the purposes stated.

3. The elevator and dump composed of the frame A and A^2 and posts B, the platform B^2, the cylinders C and C^2, each having a ratchet, J, the pawls K, and spring L, the adjustable gear-wheels D, the shaft F, having a fixed pinion, F^2, and fixed wheel F^3, the shaft G, having a fixed pinion, G^2, the rollers M, the ropes M^2, and the adjustable chute P, substantially as shown and described, to operate in the manner set forth.

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Witnesses:

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